



"The Company believes its technical, production, human and financial resources are best employed in the design, development, production and marketing of products employed in the control and transfer of all types of liquids and gases."

A Brief History of EMCO

The company was founded in London, Ontario in 1903 by T.A. Stevens together with a group of London businessmen. Originally known as Empire Manufacturing Company, the company commenced operations with 50 employees in a location which is now the heart of downtown London. Every effort was made to manufacture the best plumbing and brass products possible and this fact very quickly won trade response. In 1906, sales amounted to \$291,000. In the same year, land was purchased for a factory on Governor's Road on the outskirts of London and the company now called Empire Brass Manufacturing Co. Ltd. moved to its present location.

During the First World War, the company's capabilities were redirected into the production of munitions requirements for the Canadian government. The wartime investment in new machinery was later turned to the production of bronze valves, plumbing faucets and other specialty items required by the plumbing and heating industry. In the same period, Empire Brass commenced the distribution of other plumbing and heating materials to the plumbing trade in London and later in other Canadian cities.

In 1939, Empire Brass again diverted its efforts to war requirements. This time the production was geared to specialty items such as portlights, voice tube equipment, bronze flanges, etc. required for the Canadian navy.

At war's end, projected demand for Empire Brass products required expansion on a vast scale. So a decision was made to seek public financing and in 1946 the company became publicly-owned. Expansion began in earnest and acquisitions greatly increased the number of supply branch outlets across Canada. In line with this program of expansion and continuing diversification, the company was renamed Emco Limited in 1957.

Coupled with domestic growth, companies were established outside of Canada. Operations were begun in England in 1949, in Germany in 1957, in Australia in 1963, in the United States in 1965, in France and Japan in 1966 and in Brazil in 1973. Of particular significance was Emco's move into the United States in 1965 through acquisition of the Buckeye Iron and Brass Works in Dayton, subsequently moved to Conneaut, Ohio. Buckeye's service station and fluid handling products provided a perfect complement to Emco's existing petro-chemical handling equipment lines.

In 1967 the company purchased Wheaton Inc. of Union, New Jersey. This acquisition culminated a 40-year business relationship between Emco and Wheaton, when Emco Limited, through an exclusive licencing agreement, produced and distributed Emco Wheaton fluid handling equipment in Canada and in the other countries which originally formed the British Commonwealth. In 1973, the Conneaut, Ohio and Union, New Jersey operations in the U.S.A. were amalgamated in Conneaut, now the company's largest plant outside of Canada.

In December 1973, Masco Corporation of Taylor, Michigan became a partner by acquiring approximately 49% of Emco's common shares.

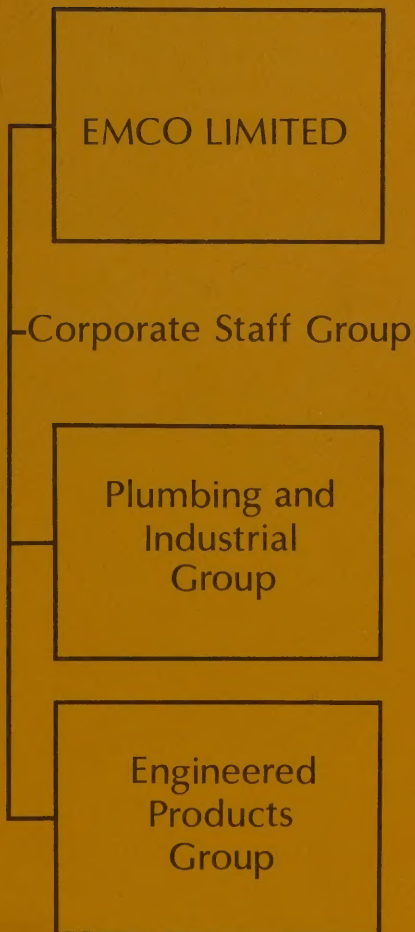
Masco is the nucleus of a group of companies engaged in metal working operations. One division of this U.S. corporation introduced the first successful single lever faucet which continues to be the leader in its field.

The partnership with Masco has reinforced Emco's strengths in development and manufacturing technology, marketing and finance.

EMCO Limited

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Corporate Profile

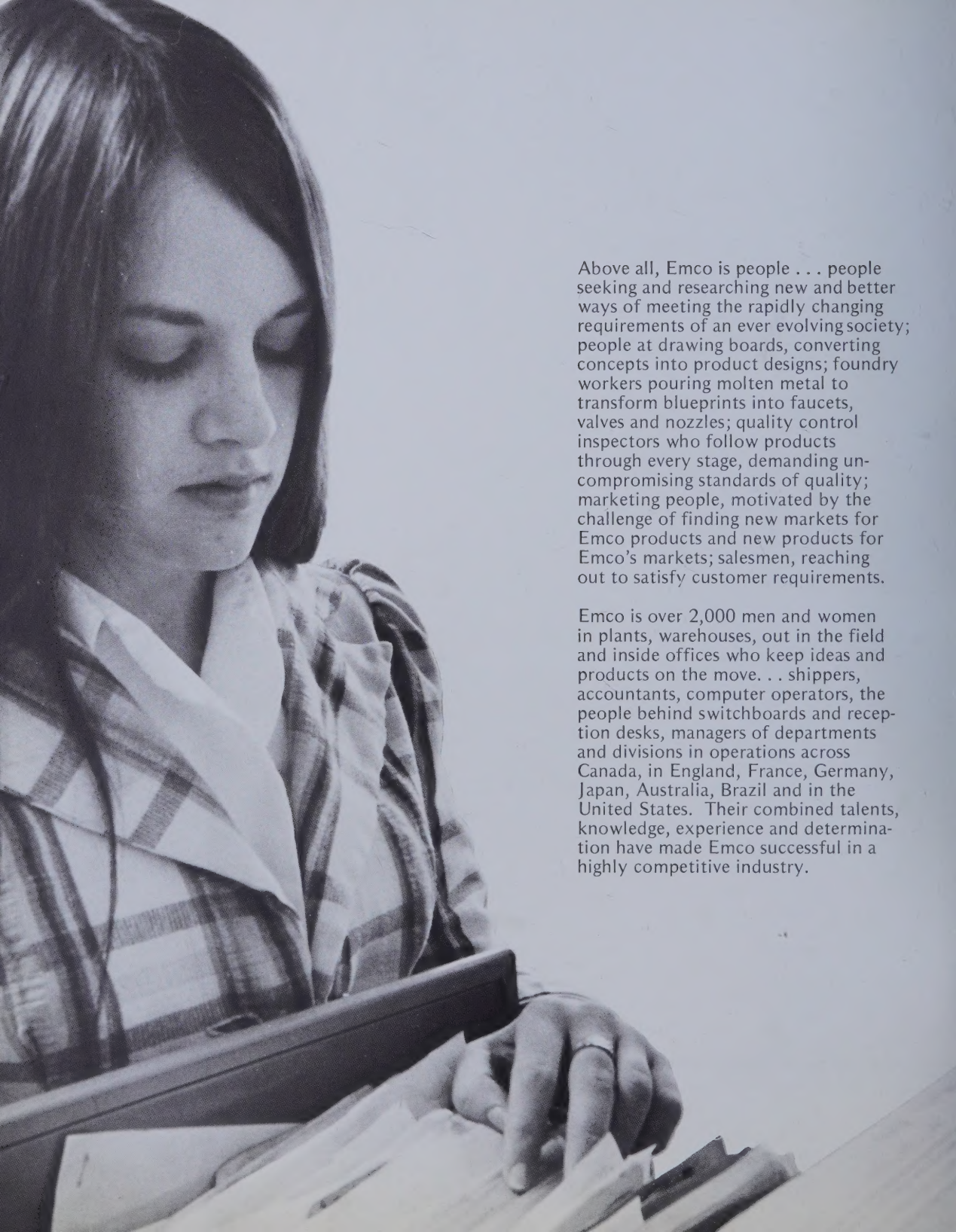


AROUND THE WORLD. . .

In Australia, an ocean-going tanker unloads its cargo of Middle East crude oil. In Western Canada, a worker turns a valve and natural gas starts its flow to industries and homes. In Germany, toasts are raised with champagne which has flowed through a special fluid transfer system. In the United States, a service station attendant fills an automobile gas tank. In countless Canadian homes, people turn on their kitchen sink faucets. Each instance represents Emco's range of products and the scope of its market.

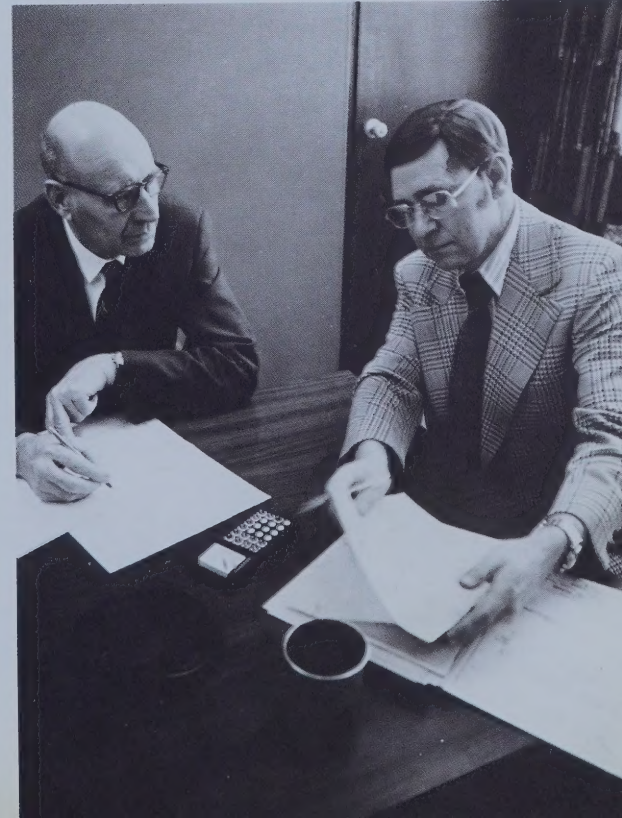
Headquartered in London, Ontario, Emco Limited is a vast manufacturing and wholesaling company which operates on a broad international scale providing high-quality products for the plumbing, heating, petro-chemical and other allied industries. From plants and wholesale branches across Canada and around the world, Emco products find their way into homes, offices, schools, stores, factories, hospitals, service stations, airports, loading terminals — in a variety of applications involving the transmission and control of fluids.

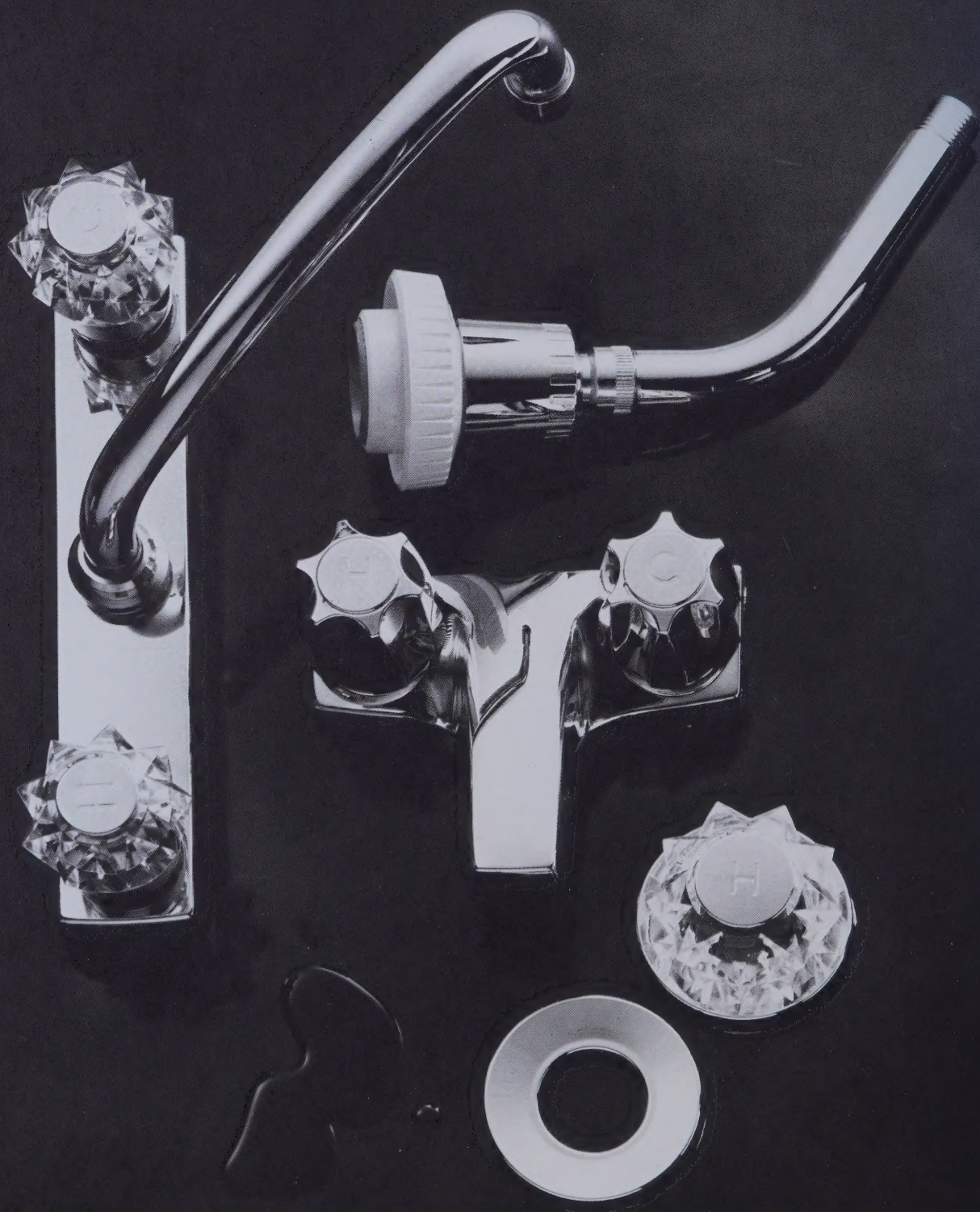
Emco products range from relatively simple items for the household to sophisticated fluid handling equipment for industry. The Plumbing and Industrial Group, one of the two operating groups of Emco Limited, manufactures plumbing, heating and industrial piping products. The Engineered Products Group, the other group of the company, is responsible for the worldwide development, production and marketing of fluid-handling equipment.



Above all, Emco is people . . . people seeking and researching new and better ways of meeting the rapidly changing requirements of an ever evolving society; people at drawing boards, converting concepts into product designs; foundry workers pouring molten metal to transform blueprints into faucets, valves and nozzles; quality control inspectors who follow products through every stage, demanding uncompromising standards of quality; marketing people, motivated by the challenge of finding new markets for Emco products and new products for Emco's markets; salesmen, reaching out to satisfy customer requirements.

Emco is over 2,000 men and women in plants, warehouses, out in the field and inside offices who keep ideas and products on the move. . . shippers, accountants, computer operators, the people behind switchboards and reception desks, managers of departments and divisions in operations across Canada, in England, France, Germany, Japan, Australia, Brazil and in the United States. Their combined talents, knowledge, experience and determination have made Emco successful in a highly competitive industry.





Plumbing and Industrial Group

DIVISIONS

Emco Supply — regional offices, Montreal, Toronto, Calgary; Thirty-two branches across Canada distributing plumbing, heating and industrial piping supplies to mechanical contractors and industry.

Arnold's Cove	Ottawa
Barrie	Peterborough
Belleville	Prince George
Calgary	Quebec
Edmonton	Regina
Guelph	Saint John
Halifax	Saskatoon
Hull	Sault Ste. Marie
Kitchener	Sherbrooke
Lethbridge	St. Catharines
London	Sudbury
Medicine Hat	Terrace
Moncton	Toronto (Weston)
Montreal	Ville de Brossard
North Bay	Windsor
Oshawa	Winnipeg

General Manufacturing — London Factory, London, Canada — manufacturer of plumbing, heating and industrial piping products for sale to distributors, — Emco Plastics Limited, Brampton, Ontario — manufacturer of plastic plumbing and piping components.

Canadian Clyde Tube Forgings Limited, Toronto, Canada — supplier of steel welding fittings for industry.
Branches — Montreal, Vancouver, Edmonton

The Plumbing and Industrial Group of Emco Limited is made up of three divisions: General Manufacturing, Emco Supply and Canadian Clyde Tube Forgings Limited.

The General Manufacturing Division comprises two plants, one in London, Ontario and the other in Brampton, Ontario.

The Emco Supply Division is a wholesale distributing organization which sells a broad range of plumbing, heating and industrial supplies to mechanical contractors and industry.

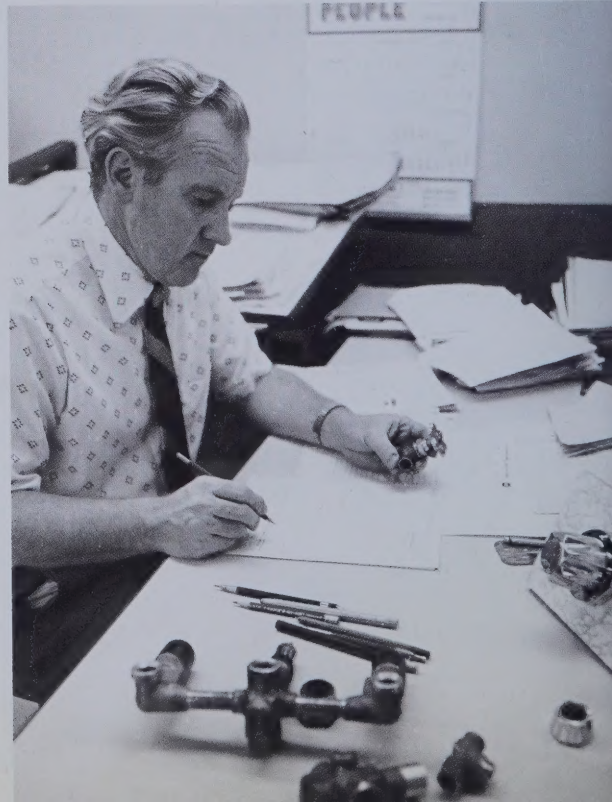
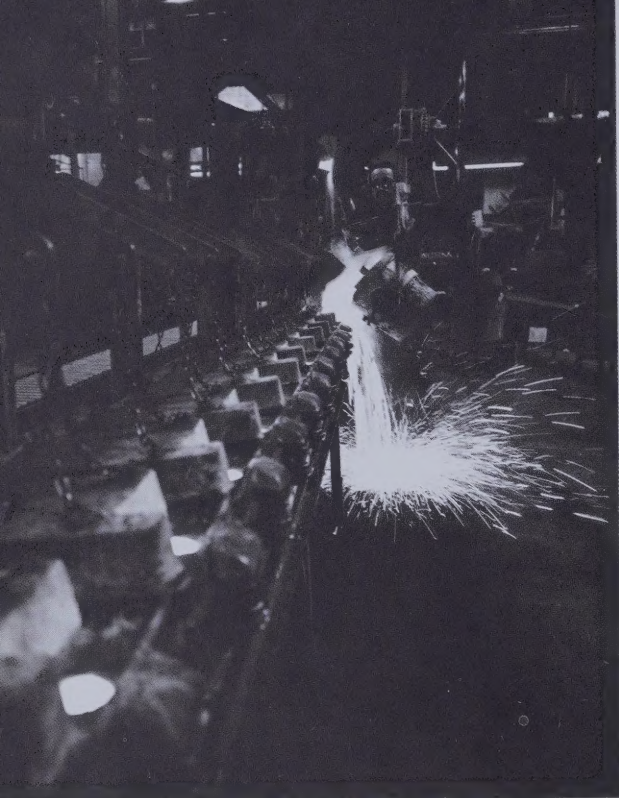
Canadian Clyde Tube Forgings Limited is a fabricator and distributor of steel welding fittings for industry.

From the plants and branches that make up the Plumbing and Industrial Group emerge more than 10,000 different products ranging from relatively simple faucets to rigidly-specified industrial components.

MANUFACTURING OPERATIONS

London Plant: Design and production of Emco products involves close coordination of men, materials and machines. Tons of brass, copper and other metals in the form of ingot, tube, strip, bar and rod flow through the London plant. By the time the finished products are packed for shipment, some ten different operations may have taken place. Cores and moulds are formed for the pouring of basic shapes. Molten metal from the foundry's induction furnaces is poured into the moulds to produce the basic castings which are later machined, buffed, plated and assembled. At each critical stage, every component is carefully inspected.

The foundry at the London Plant is one of the most advanced non-ferrous foundries in Canada. More than 6,000 different brass and bronze castings, covering the complete range of fittings manufactured at London, are produced in this facility. The equipment ranges from fully automatic and semi-automatic core and moulding machines to manually operated units.



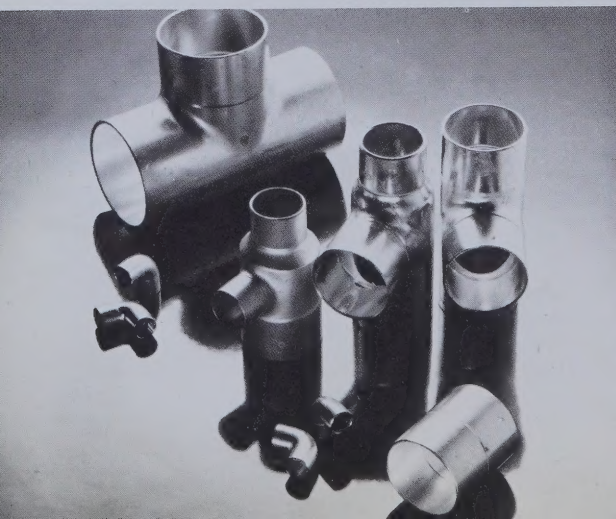
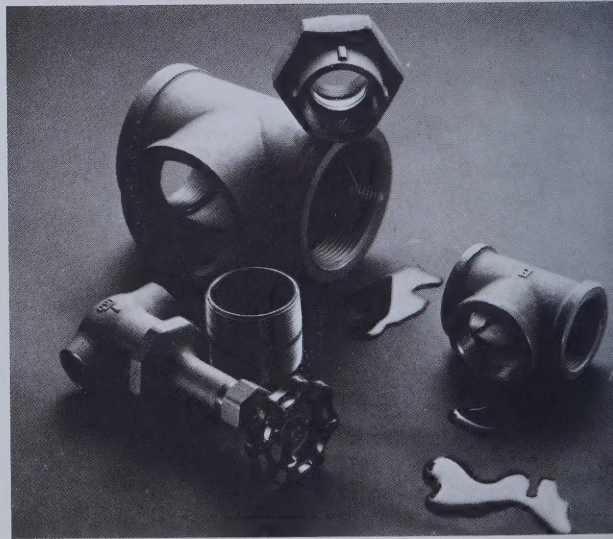
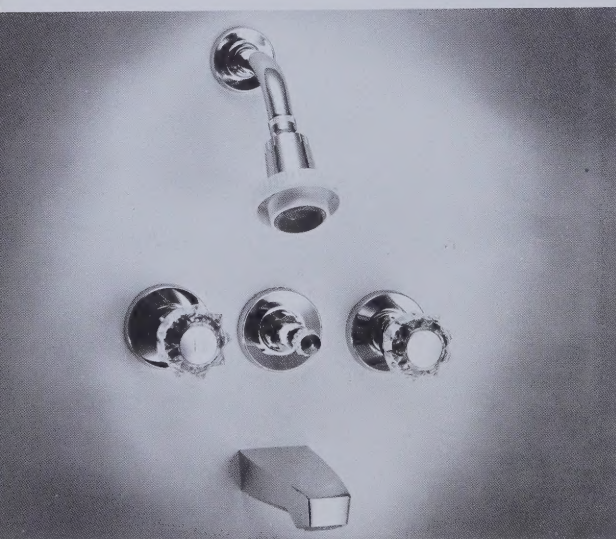
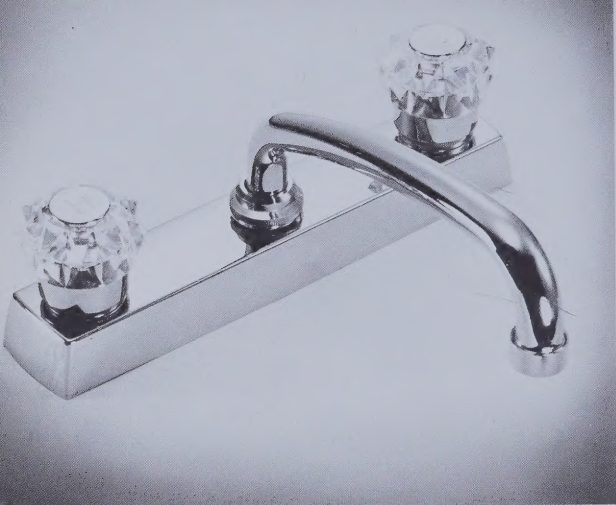
Supplementing the moulding operation is our pressure die casting machine that produces brass castings of simple design not requiring sand cores.

A large plating facility producing chrome plated metal and plastics components constitutes a part of the London operation. The London manufacturing plant has a total floor area of 320,000 sq. ft.

Brampton Plant: Emco marketed Canada's first one-piece ABS lavatory faucet cover in 1968. Since then, the company's Plastics plant in Brampton has continually extended the application of chrome plating grade and other types of plastics to plumbing and other industries. New developments in plastics and other non-metallic materials are constantly being tested and incorporated into products or substituted for metal when proven to perform better.

The Brampton facility occupies 120,000 sq. ft. It is designed to operate on a continuous work flow basis. Raw thermoplastics are received at one end of the plant and finished products leave from the other. From the silo, the raw material goes into a blender and then to drying stations from which it is pneumatically fed through overhead pipes into the production machines. After finishing and quality control checks, the products are delivered to the warehouse for shipment.





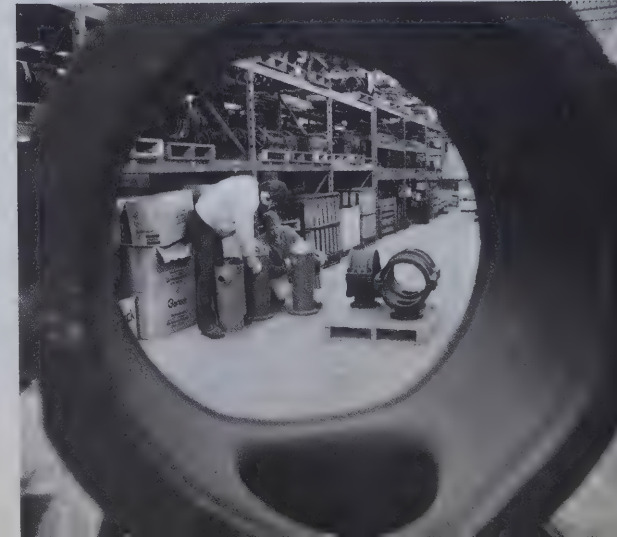
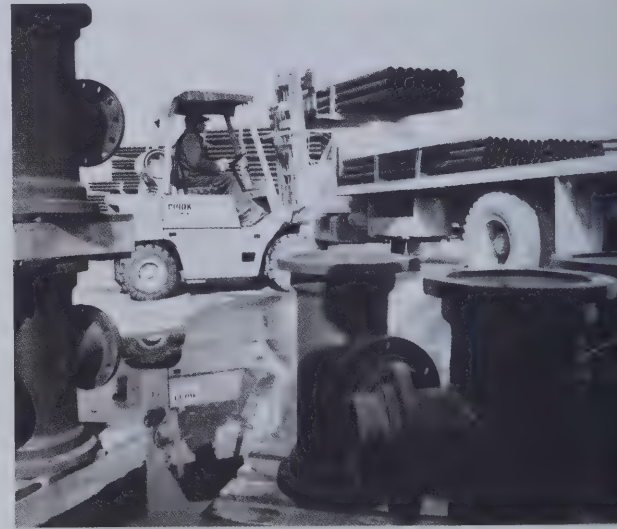
PRODUCTS

Products manufactured at the London plant include a complete range of faucets and other trim for use with sinks, basins and baths; specialized institutional faucets and laboratory service fittings for industrial piping; waterworks stops and fittings used by municipalities for underground water service supply; special purpose fluid handling equipment; valves and fittings for petroleum and propane installations; and a wide range of additional items.

The Brampton plastics plant produces centreset faucet covers and handles, a wide variety of other chrome plated plastic parts that have replaced die cast zinc parts and other components in the Emco plumbing line and pipe fittings for the plumbing industry. This plant also custom produces over 400 different parts and sub-assemblies in a variety of thermoplastics for companies in Canada, the United States and in other parts of the world. These items include golf club head components, disposable commodes for hospitals and a wide range of parts for the building, construction, automotive, appliance, machine tool and gas industries.

Emco-manufactured products are warehoused centrally in Brampton and regionally in Vancouver, Calgary and Montreal. They are distributed across Canada by the company's wholesale supply division, Emco Supply, and through other independent wholesalers.





EMCO SUPPLY

Emco Supply operates a network of 32 wholesale outlets across Canada. In addition to serving as the single largest outlet for Emco manufactured products, the division also handles a wide range of allied product groups manufactured by other companies. These include vitreous china and steel enamelled plumbing ware, steel, copper and plastics pipe, industrial valves, water pumps, waterworks product lines and heating equipment.

Wholesaling is an important service in the industry particularly in relation to that part of the operation which adds value to the manufactured goods. "Value Adding" is the assembling of products from various sources at locations convenient to the customer, having these assembled products ready when needed, packaging them in convenient units, shipping them as and where required and generally maintaining inventories to match volume and type of demand.

Emco Supply's operating control is decentralized into three marketing regions. These are: **Eastern Region** — comprising Ottawa-Hull and the east including the Province of Quebec, New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland; **Central Region** — covering most of Ontario; and the **Western Region** — extending from Thunder Bay to the West Coast. Regional head offices are located in Montreal, Toronto and Calgary respectively. This structure provides for greater delegation of authority and improves the division's ability to develop and deploy marketing strategies closely aligned to the constantly changing needs and patterns of local markets.

CANADIAN CLYDE TUBE FORGINGS LIMITED

Canadian Clyde Tube Forgings Limited of Toronto is a wholly-owned subsidiary of Emco and constitutes another important division of the Plumbing and Industrial Group. This company fabricates and supplies steel welding fittings and flanges to almost every branch of industry where piping is used. National distribution to the wholesale market is handled from Toronto and through branch offices in Montreal, Edmonton and Vancouver.



**THE B 0001
MARINE
LOADING ARM**

EMCO

Wheaton



Engineered Products Group

DIVISIONS

Research and Development Centre — Margate, England

Wheaton Australia Pty. Limited — Sydney, Australia

Emco Wheaton Industria E Commercio S.A. (77% owned) Rio de Janeiro, Brazil

Emco Wheaton U.K. Limited — Margate, England

Emco Wheaton S.A. — Paris, France

Emco Wheaton GmbH (76% owned) — Kirchhain, West Germany

Emco Wheaton Inc. — Conneaut, Ohio, United States

Emco Wheaton (Japan), Limited — Yokohama, Japan

Emco-Wheaton Limited — Toronto, Canada;
Branches —

Montreal, Calgary, Vancouver (Burnaby)

The Engineered Products Group manufactures and distributes engineered fluid handling equipment and systems used in the oil and petrochemical industries. These products, which are sold under the name, Emco Wheaton, include: service station equipment, marine loading assemblies, storage tank equipment, swing joints, loaders and unloaders, tank truck equipment, hose end couplings, dry-breaks and fleet refueling systems.

MANUFACTURING

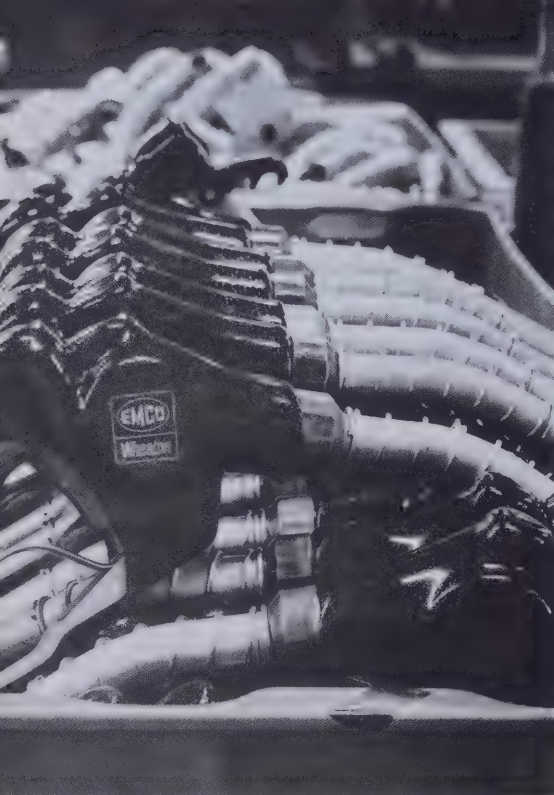
The manufacturing operations of the Engineered Products Group are conducted through eight subsidiary companies:

Australia	Wheaton Australia Pty. Ltd. Sydney
Brazil	Emco Wheaton Industria E Commercio S.A., (77% owned) Rio de Janeiro
Canada	Emco Wheaton Limited Toronto, Ontario
England	Emco Wheaton U.K. Limited Margate, Kent
France	Emco Wheaton S.A. Cergy, Paris
Germany	Emco Wheaton GmbH (76% owned) Kirchhain, West Germany
Japan	Emco Wheaton (Japan) Limited Yokohama
U.S.A.	Emco Wheaton Inc. Conneaut, Ohio

All of these subsidiaries are wholly-owned by Emco with the exception of the plants in Brazil and West Germany which are 77% and 76% owned respectively. In total, these plants comprise a fully-integrated and coordinated manufacturing group.

RESEARCH

In support of its manufacturing operations, the company maintains a research and development centre at Margate, England. Design engineers



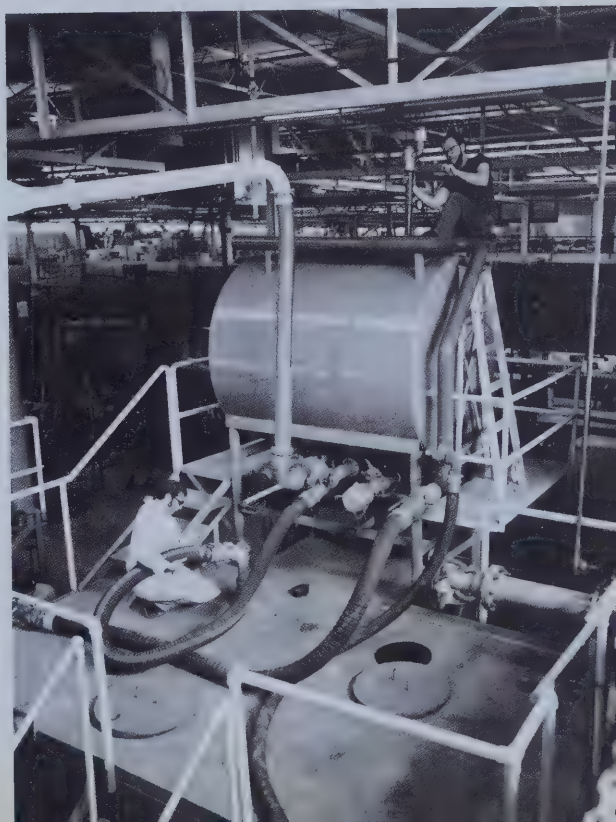
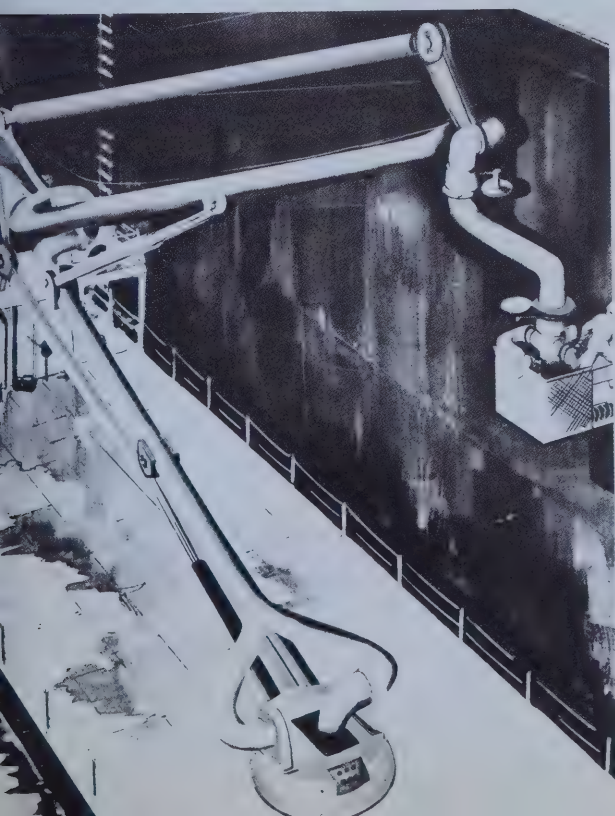
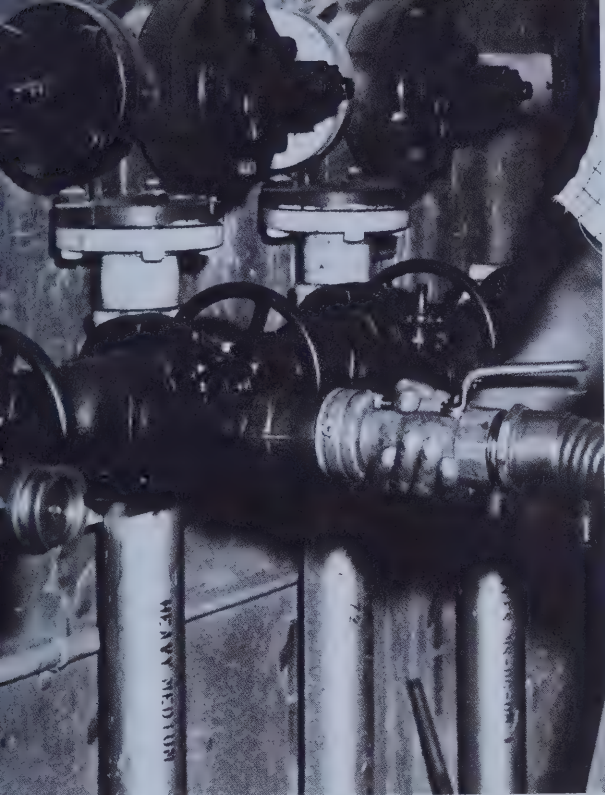
and technicians at this centre evaluate existing equipment and systems, work on improvements and design new products.

Typical areas of investigation include sealing problems, liquid loader design, marine arm design, experimental work on rubbers, plastics and other materials. A new product recently designed and developed by the centre is the marine bunkering unit for fueling large ships.

PRODUCTS

The products manufactured and distributed by the Engineered Products Group cover almost every industrial application involving the transfer of fluids. Typical examples include:

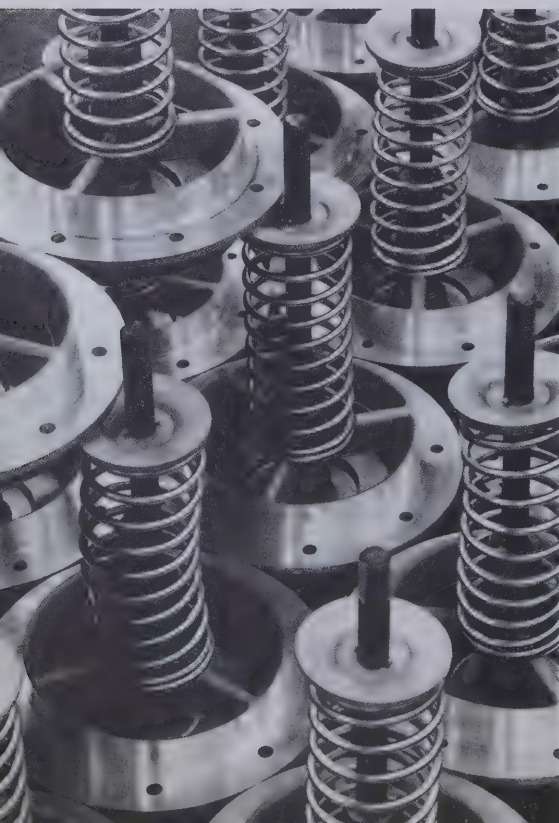
- (a) **Automatic Service Station Nozzles** This highly engineered nozzle, approved by Underwriters' Laboratories, features a rugged one piece aluminum body with a stainless steel operating lever. It is produced for both regular and unleaded gasoline service.
- (b) **The Emco Wheaton Fleet Fueling System** provides a positive tight fill connection to eliminate fuel spillage. Providing fuel flow capabilities up to 300 U.S. gallons per minute, this system is designed for use with bus and truck fleets, railway locomotives and "off road" equipment.
- (c) **Emco Wheaton "Dry-Breaks"** are self-sealing coupling valves which provide a safe, completely sealed system for fluid transfer. With these couplings there is no waste and no spillage. Dry-Breaks are available for flow rates up to 1500 U.S. gallons per minute.
- (d) **Top Loading Systems** are manufactured by Emco Wheaton in all basic configurations to handle the normal range of petroleum products, acids, gases, molten sulphur, anhydrous ammonia and many other products. The upper right-hand picture on page 15 shows railway tank car loading in Australia.
- (e) **Marine Arm Bunkering Unit** Mounted on a barge, this unit transfers bunker fuel





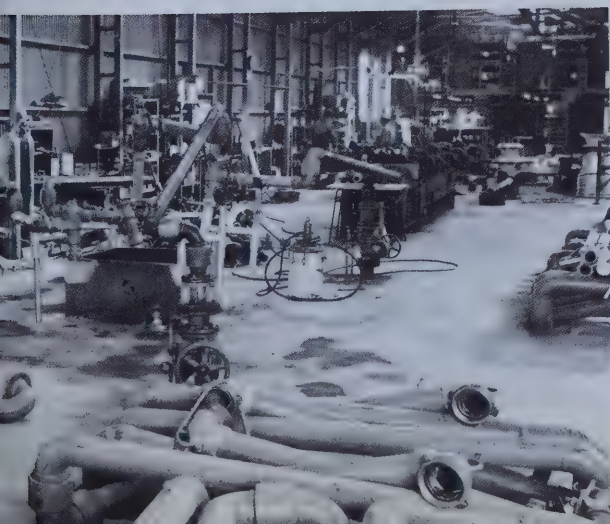
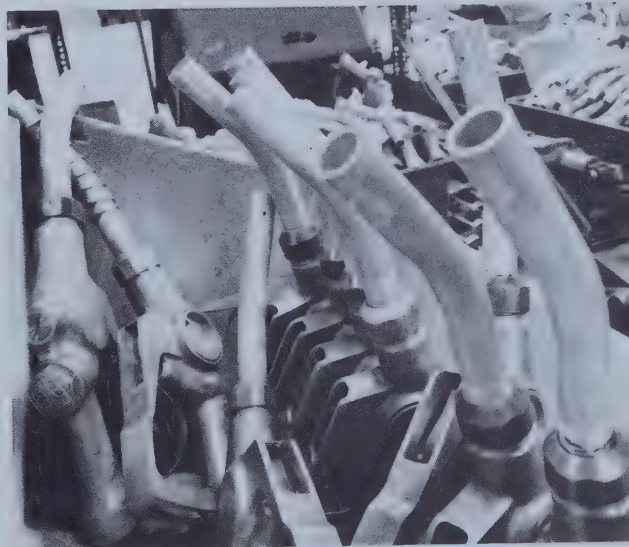
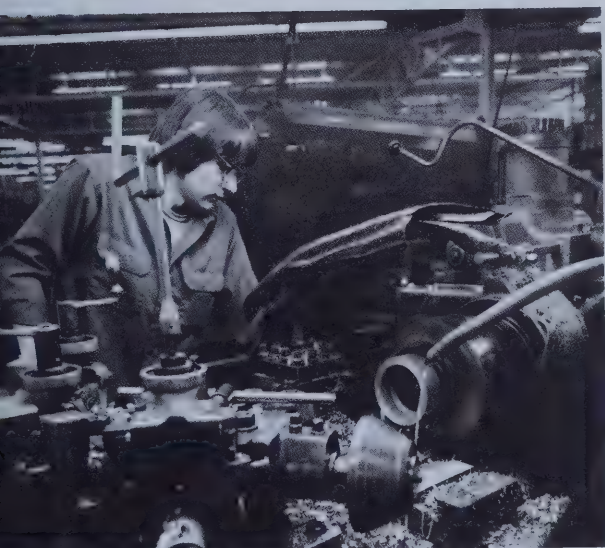
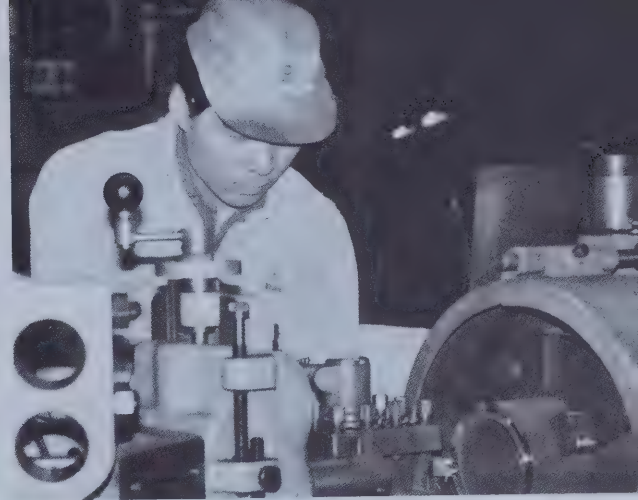
from the barge to the ship. It has been designed for fueling container ships, bulk carriers and super tankers and is offered from our division in Germany.

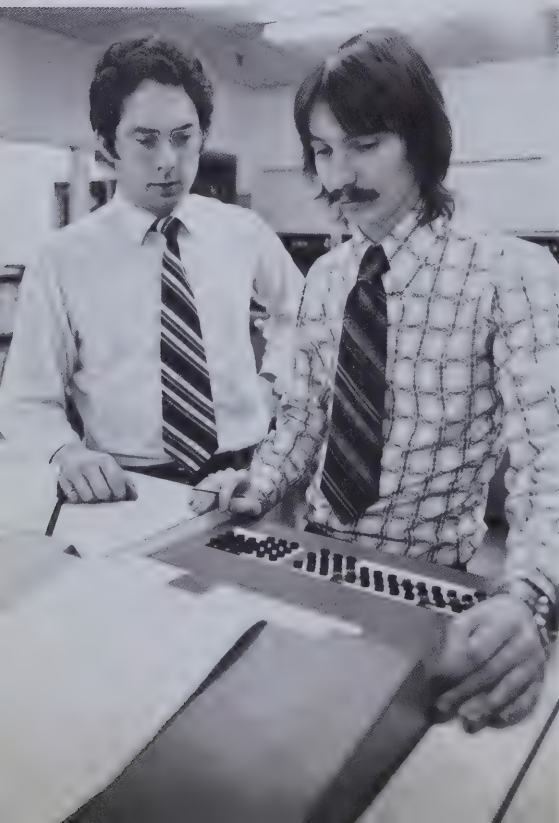
- (f) **Vapor Transfer Systems** Over the past few years, considerable emphasis has been placed on the development of products in the area of vapor recovery. The regulation of vapor emission in the United States has opened a new market for vapor transfer systems in the distribution of gasoline. As the term implies, this system contains and transfers vapors which otherwise would be lost to the atmosphere when gasoline is transferred from tank trucks to underground storage tanks at service stations and again in the transfer of gasoline from these tanks to the automobile. Emco Wheaton has pioneered product development in this area and is currently producing a number of products for this market.



- (g) **Emco Wheaton Marine Arms** (pictured on page 12) are fully counterbalanced systems which are used for the transfer of petroleum products to and from ships. These arms are designed in diameters ranging from 6" to 24". A bank of four 16" arms can transfer at the rate of 95,000 barrels per hour. Emco Wheaton Marine Arms, like most other Emco Wheaton products, are in use around the world.

Some specialized fluid handling systems have also been designed for transfer of milk in England, Champagne in Germany, Saki in Japan and heavy water for a nuclear power station in Canada. Loading arms with special seals and accessories have also been supplied for handling asphalt in Poland.





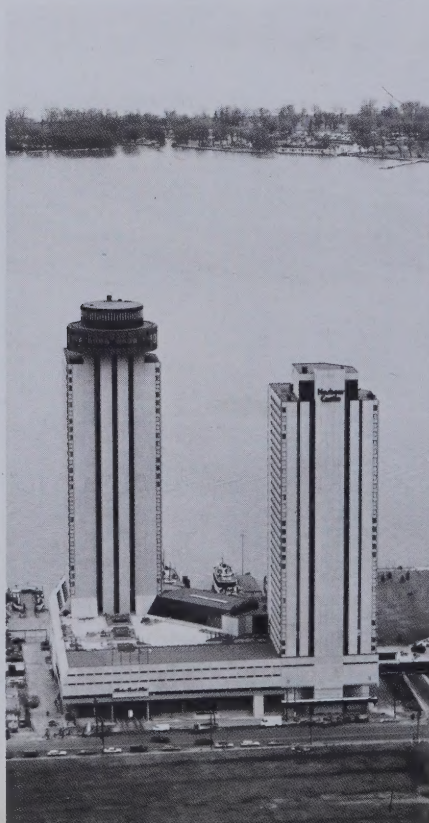
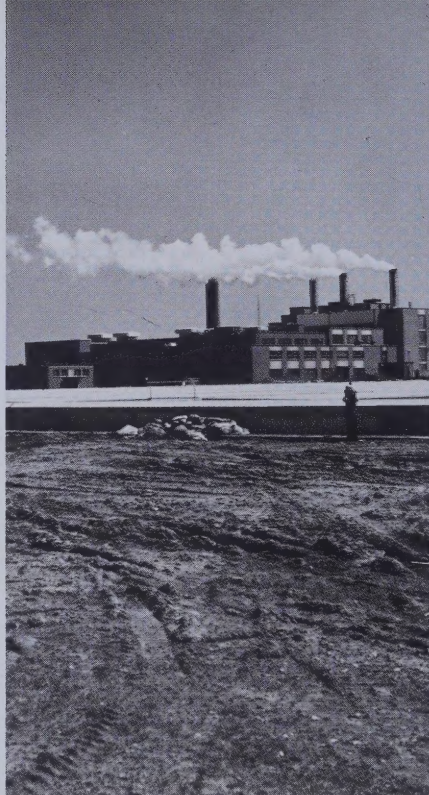
DISTRIBUTION

The products of the Engineered Products Group are distributed directly and through established distributors and agents serving over 100 countries. In addition to the direct marketing activities carried out by each subsidiary, five marketing coordinators who cover Europe, the Middle East, Africa, the Far East and Latin America work closely with Emco Wheaton agents and distributors.

The following list of countries and areas in which Emco Wheaton is represented provides an interesting picture of the international scope of the company:

Angola	Guyana	Peru
Argentine	Hong Kong	Philippines
Australia	Iceland	Poland
Austria	India	Portugal
Belgium	Indonesia	Scandinavia
Bolivia	Iran	Singapore
Brazil	Iraq	South Africa
Canada	Italy	Spain
Chile	Jamaica	Sri Lanka
Colombia	Japan	Sudan
Cyprus	Jordan	Switzerland
East Africa	Korea	Taiwan
Ecuador	Kuwait	Thailand
Eire & N. Ireland	Lebanon	Trinidad
El Salvador	Luxembourg	Turkey
England	Malaysia	U.S.A.
France	Mexico	Venezuela
Germany	Netherlands	West Africa
Ghana	New Zealand	Yugoslavia
Greece	Panama	





IN SUMMARY

In homes, hotels, hospitals, schools, public buildings, factories, petroleum fields, at seaports, service stations and refineries — in fact, almost everywhere in over 100 countries around the world — Emco products are used for the control and transfer of fluids. Whether it is a relatively simple household faucet or a complex highly-engineered fluid transfer system, three-quarters of a century of product quality and reliability have made the name, Emco, a symbol for product excellence.

Over 10,000 different products and components now bear the Emco name. Backed by the ingenuity and skills of the more than 2,000 Emco people in 42 plants and branches across Canada in Australia, Brazil, England, France, Germany, Japan and the United States, the list continues to grow. Emco is always ready to meet the evolving needs of the international consumer and industrial markets which the company serves.



Emco Limited

Box 5300, London, Canada N6A 4N7

Subsidiaries in Australia, Brazil, Canada, France, Great Britain, Japan, the United States and West Germany

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